Journal of Nuclear Materials 149 (1987) 353–355
North-Holland, Amsterdam

AUTHOR INDEX

Aoki, K., see Kitajima 149 (1987) 269

Balasubramanian, R., see Viswanathan 149 (1987) 302
Bartels, A., F. Dworschak and M. Weigert, Isochronal recovery and damage rate measurements in electron-irradiated dilute NiGe 149 (1987) 160
Bayoglu, A.S., see Ducroux 149 (1987) 101
Biddle, P. and J.H. Rees, Characterisation of the activities associated with fast reactor cladding hulls 149 (1987) 7
Black, T.J., see Kirk 149 (1987) 21
Blackburn, D.A., see Grant 149 (1987) 180
Bort, H., I. Wolf and S. Leistikow, Preselection of Ni–Cr(–Mo) alloys as potential canister materials for vitrified high active nuclear waste by electrochemical testing 149 (1987) 132
Burk, R.C., Production of uranium metal using a thermal plasma (Letter to the Editors) 149 (1987) 103

Cann, C.D., see Griffiths 149 (1987) 200
Carpenter, S.H., see Heiple 149 (1987) 168
Chilson, P.B., see Jung 149 (1987) 1
Chirkin, A.V., see El-Shanshoury 149 (1987) 74
Choi, J.-K., see Choo 149 (1987) 289
Choo, K.-N., S.-I. Pyun and J.-K. Choi, A study on the mechanism of iodine-induced stress-corrosion cracking of Zircaloy-4 149 (1987) 289
Coronado, P.R., see Fearon 149 (1987) 105
Corwin, W.R., J.M. Vitek and R.L. Klueh, Effect of nickel content of 9Cr–1MoVNb and 12Cr–1MoVW steels on the aging and irradiation response of impact properties 149 (1987) 312
Cronenberg, A.W. and D.J. Osetek, Fuel morphology effects on the chemical form of iodine release from severely damaged fuel 149 (1987) 252
Cummings, D.L., see Grant 149 (1987) 180

Darling, D.H., see Fearon 149 (1987) 105
Darwin Albert Raj, D., see Viswanathan 149 (1987) 302
Davis, J.W. and A.A. Haasz, Hydrocarbon formation due to hydrogen ion impact on amorphous hydrogenated carbon films (Letter to the Editors) 149 (1987) 349
Ducroux, R., A.S. Bayoglu, M. Fromont and R. Lorenzelli, Étude de la diffusion chimique de l'oxygène dans $(U_{0,8}Pu_{0,2})O_{2-x}$ à 1400°C (Letter to the Editors) 149 (1987) 101
Dworschak, F., see Bartels 149 (1987) 160

El-Shanshoury, I.A., A.V. Chirkin and A. El-Yazgi, On the oxidation of zirconium by heat tinting 149 (1987) 74
El-Yazgi, A., see El-Shanshoury 149 (1987) 74
English, C.A., see Kirk 149 (1987) 21

Fearon, E.M., P.R. Coronado, R.G. Garza, D.H. Darling and P.C. Souers, Shrinkage and opacity of 100 kg/m^3 silica aerogel foam in liquid deuterium–tritium (Letter to the Editors) 149 (1987) 105
Fischer, G., see Gärtner 149 (1987) 29
Foreman, A.J.E. and B.N. Singh, Helium flux to grain boundaries during irradiation (Letter to the Editors) 149 (1987) 266
Fromont, M., see Ducroux 149 (1987) 101
Fujino, T., see Nakamura 149 (1987) 80
Fukuda, K., see Hayashi 149 (1987) 57
Fukuda, K., see Minato 149 (1987) 233
Furuya, K., see Hashimoto 149 (1987) 69

Gärtner, M. and G. Fischer, Survey of the power ramp performance testing of KWU's PWR UO_2 fuel 149 (1987) 29
Garza, R.G., see Fearon 149 (1987) 105
Gelles, D.S., Effects of irradiation on ferritic alloys and implications for fusion reactor applications 149 (1987) 192
Ghoniem, M.M., D. Pachur and F.H. Hammad, Mechanical and fracture toughness properties of an irradiated 20MnMoNi55 pressure vessel steel weld (Letter to the Editors) 149 (1987) 272
Gilbert, R.W., see Holt 149 (1987) 51
Goodhew, P.J., see Marochov 149 (1987) 296
Grant, D.M., D.L. Cummings and D.A. Blackburn, Hydrogen in 304 steel: diffusion, permeation and surface reaction 149 (1987) 180
Griffiths, M., see Holt 149 (1987) 51
Griffiths, M., C.D. Cann and R.C. Styles, Neutron irradiation damage in 64% cold-worked titanium 149 (1987) 200

Haasz, A.A., see Davis 149 (1987) 349
Haines, H.R., see Rogl 149 (1987) 283
Hammad, F.H., see Ghoniem 149 (1987) 272
Hampton, N., G.A. Saunders, J.H. Harding and A.M. Stoneham, The dielectric constant of UO_2 below the Néel point 149 (1987) 18
Harding, J.H., see Hampton 149 (1987) 18
Hartman, Jr., J.T., see Keene 149 (1987) 218
Hashimoto, I., H. Yorikawa, H. Mitsuya, H. Yamaguchi, K. Takaishi, T. Kikuchi, K. Furuya, E. Yagi and M. Iwaki, Annealing behavior of krypton-implanted aluminum. I. Diffraction effects from krypton bubbles 149 (1987) 69
Hayashi, K., F. Kobayashi, K. Minato, K. Ikawa and K. Fukuda, In-pile release behavior of metallic fission products in graphite materials of an HTGR fuel assembly 149 (1987) 57
Heiple, C.R. and S.H. Carpenter, Acoustic emission from low temperature phase transformations in plutonium 149 (1987) 168
Higashiguchi, Y., Y. Suzuki, E. Yagi, M. Narui and H. Kayano, Effect of helium on the deformation mode for Ti–7.5Al alloy 149 (1987) 328
Holt, R.A., M. Griffiths and R.W. Gilbert, c-component dislocations in Zr–2.5 wt% Nb alloy 149 (1987) 51

Ikawa, K., see Hayashi 149 (1987) 57
Inaba, H., K. Naito and M. Oguma, Heat capacity measurement of $U_{1-y}Gd_yO_2$ ($0.00 \leqslant y \leqslant 0.142$) from 310 to 1500 K 149 (1987) 341
Iseki, T., see Suzuki 149 (1987) 334
Ito, M., see Suzuki 149 (1987) 334
Iwaki, M., see Hashimoto 149 (1987) 69

James, L.A., Fatigue-crack propagation behavior of HT-9 steel 149 (1987) 138
Jenkins, M.L., see Kirk 149 (1987) 21
Jung, P. and P.B. Chilson, Creep and microstructural changes in dispersion hardened Ni–20% Cr–1% ThO_2 during proton irradiation 149 (1987) 1

Kamizono, H., S. Kikkawa, S. Tashiro, H. Nakamura and H. Kanazawa, Air contamination by cesium in a canister containing nuclear waste glass (Letter to the Editors) 149 (1987) 113
Kanazawa, H., see Kamizono 149 (1987) 113
Kayano, H., see Higashiguchi 149 (1987) 328
Keene, K.H., J.T. Hartman, Jr., A. Wolfenden and G.M. Ludtka, Determination of dynamic Young's modulus, shear modulus, and Poisson's ratio as a function of temperature for depleted uranium–0.75 wt% titanium using the piezoelectric ultrasonic composite oscillator technique 149 (1987) 218
Kikkawa, S., see Kamizono 149 (1987) 113
Kikuchi, T., see Hashimoto 149 (1987) 69
Kirk, M.A., I.M. Robertson, M.L. Jenkins, C.A. English, T.J. Black and J.S. Vetrano, The collapse of defect cascades to dislocation loops 149 (1987) 21
Kitajima, M., K. Aoki and M. Okada, Observation of shape change in the Raman spectrum of graphite exposed to deuterium glow (Letter to the Editors) 149 (1987) 269
Klein, A.C. and D.-K. Sze, Activation product transport in FLiBe–vanadium alloy–HT9 system 149 (1987) 261
Klueh, R.L., see Corwin 149 (1987) 312
Kobayashi, F., see Hayashi 149 (1987) 57
Kolomytkin, V.V., Zones of radiation point defect instability near the [100] (010) edge dislocation in α-Fe 149 (1987) 321

Leistikow, S., see Bort 149 (1987) 132
Lewis, M.B., Diffusion and trapping of ion-implanted helium in nickel 149 (1987) 143
Lorenzelli, R., see Ducroux 149 (1987) 101
Ludtka, G.M., see Keene 149 (1987) 218

Marochov, N., L.J. Perryman and P.J. Goodhew, Growth of inert gas bubbles after implantation 149 (1987) 296
Maruyama, T., see Suzuki 149 (1987) 334
Mathews, C.K., see Viswanathan 149 (1987) 302
Michel, D.J., see Smith 149 (1987) 109
Minato, K., see Hayashi 149 (1987) 57
Minato, K. and K. Fukuda, Chemical vapor deposition of silicon carbide for coated fuel particles 149 (1987) 233
Mitsuya, H., see Hashimoto 149 (1987) 69
Mogensen, M., see Walker 149 (1987) 121
Mori, T., see Suzuki 149 (1987) 334
Mutoh, I., see Suzuki 149 (1987) 41

Naik, M.C., see Paul 149 (1987) 277
Naito, K., see Inaba 149 (1987) 341
Nakamura, A. and T. Fujino, Thermodynamic study of UO_{2+x} by solid state emf technique 149 (1987) 80
Nakamura, H., see Kamizono 149 (1987) 113
Narui, M., see Higashiguchi 149 (1987) 328
Noda, K., see Tanifuji 149 (1987) 227

Ogawa, M., K. Saneyoshi, Y. Takagi, A. Shirota and Y. Suzawa, Critical helium fluence for hydrogen trapping in predamaged stainless steel 149 (1987) 247
Oguma, M., see Inaba 149 (1987) 341

Okada, M., see Kitajima 149 (1987) 269
Okuda, T., see Takamura 149 (1987) 212
Osetek, D.J., see Cronenberg 149 (1987) 252

Pachur, D., see Ghoniem 149 (1987) 272
Paul, A.R., M.C. Naik and K.S. Venkateswarlu, Mass transport of cobalt and copper in Monel-400 149 (1987) 277
Perryman, L.J., see Marochov 149 (1987) 296
Potter, P.E., see Rogl 149 (1987) 283
Pyun, S.-I., see Choo 149 (1987) 289

Rees, J.H., see Biddle 149 (1987) 7
Robertson, I.M., see Kirk 149 (1987) 21
Rogl, P., P.E. Potter and H.R. Haines, Phase equilibria and crystal structures in the ternary systems: actinoid metal–transition metal–boron. I. Plutonium-borides with the $LuRuB_2$-type of structure 149 (1987) 283

Saha, B., see Viswanathan 149 (1987) 302
Sai Baba, M., see Viswanathan 149 (1987) 302
Saneyoshi, K., see Ogawa 149 (1987) 247
Sato, A., see Takamura 149 (1987) 212
Saunders, G.A., see Hampton 149 (1987) 18
Shen, Y., see Takamura 149 (1987) 212
Shirota, A., see Ogawa 149 (1987) 247
Singh, B.N., see Foreman 149 (1987) 266
Smith, H.H. and D.J. Michel, Neutron irradiation effects on fatigue crack propagation in Alloy 718 at 650°C (Letter to the Editors) 149 (1987) 109
Souers, P.C., see Fearon 149 (1987) 105
Stoneham, A.M., see Hampton 149 (1987) 18
Styles, R.C., see Griffiths 149 (1987) 200
Suzawa, Y., see Ogawa 149 (1987) 247
Suzuki, T. and I. Mutoh, Compatibility of high-purity Fe–(5 to 15)Cr–1Mo ferritic steels in a sodium environment 149 (1987) 41
Suzuki, T., T. Maruyama, T. Iseki, T. Mori and M. Ito, Recovery behavior in neutron irradiated β-SiC 149 (1987) 334
Suzuki, Y., see Higashiguchi 149 (1987) 328
Sze, D.-K., see Klein 149 (1987) 261

Takagi, Y., see Ogawa 149 (1987) 247
Takahashi, T., see Tanifuji 149 (1987) 227
Takaishi, K., see Hashimoto 149 (1987) 69
Takamura, S., A. Sato, Y. Shen and T. Okuda, Impurity generation due to non-thermal electrons and its control by external bias 149 (1987) 212
Tanifuji, T., K. Noda, T. Takahashi and H. Watanabe, Tritium release from neutron-irradiated Li_2O: Diffusion in single crystal 149 (1987) 227
Tashiro, S., see Kamizono 149 (1987) 113

Venkateswarlu, K.S., see Paul 149 (1987) 277
Vetrano, J.S., see Kirk 149 (1987) 21
Viswanathan, R., M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews, Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study 149 (1987) 302
Vitek, J.M., see Corwin 149 (1987) 312

Walker, C.T. and M. Mogensen, On the rate determining step in fission gas release from high burn-up water reactor fuel during power transients 149 (1987) 121
Watanabe, H., see Tanifuji 149 (1987) 227
Weertman, J., Crack tip stress intensity factor changes arising from voids, gas filled bubbles and microcracks in irradiated materials 149 (1987) 150
Weigert, M., see Bartels 149 (1987) 160
Wolf, I., see Bort 149 (1987) 132
Wolfenden, A., see Keene 149 (1987) 218

Yagi, E., see Hashimoto 149 (1987) 69
Yagi, E., see Higashiguchi 149 (1987) 328
Yamaguchi, H., see Hashimoto 149 (1987) 69
Yorikawa, H., see Hashimoto 149 (1987) 69

Journal of Nuclear Materials 149 (1987) 356–361
North-Holland, Amsterdam

SUBJECT INDEX

Alloys *("Various" i.e. not listed elsewhere by name)*
Creep and microstructural changes in dispersion hardened Ni–20% Cr–1% ThO_2 during proton irradiation, P. Jung and P.B. Chilson 149 (1987) 1
The collapse of defect cascades to dislocation loops, M.A. Kirk, I.M. Robertson, M.L. Jenkins, C.A. English, T.J. Black and J.S. Vetrano 149 (1987) 21
Neutron irradiation effects on fatigue crack propagation in Alloy 718 at 650°C (Letter to the Editors), H.H. Smith and D.J. Michel 149 (1987) 109
Preselection of Ni–Cr(–Mo) alloys as potential canister materials for vitrified high active nuclear waste by electrochemical testing, H. Bort, I. Wolf and S. Leistikow 149 (1987) 132
Isochronal recovery and damage rate measurements in electron-irradiated dilute NiGe, A. Bartels, F. Dworschak and M. Weigert 149 (1987) 160
Mass transport of cobalt and copper in Monel-400, A.R. Paul, M.C. Naik and K.S. Venkateswarlu 149 (1987) 277

Aluminium, Aluminium Alloys and Compounds
Annealing behavior of krypton-implanted aluminum. I. Diffraction effects from krypton bubbles, I. Hashimoto, H. Yorikawa, H. Mitsuya, H. Yamaguchi, K. Takaishi, T. Kikuchi, K. Furuya, E. Yagi and M. Iwaki 149 (1987) 69

Ceramics *("Various" i.e. not listed elsewhere by name)*
Chemical vapor deposition of silicon carbide for coated fuel particles, K. Minato and K. Fukuda 149 (1987) 233
Recovery behavior in neutron irradiated β-SiC, T. Suzuki, T. Maruyama, T. Iseki, T. Mori and M. Ito 149 (1987) 334

Coatings *(incl. Coated Particles)*
Chemical vapor deposition of silicon carbide for coated fuel particles, K. Minato and K. Fukuda 149 (1987) 233

Compatibility and Corrosion
Compatibility of high-purity Fe–(5 to 15)Cr–1Mo ferritic steels in a sodium environment, T. Suzuki and I. Mutoh 149 (1987) 41
Preselection of Ni–Cr(–Mo) alloys as potential canister materials for vitrified high active nuclear waste by electrochemical testing, H. Bort, I. Wolf and S. Leistikow 149 (1987) 132
A study on the mechanism of iodine-induced stress-corrosion cracking of Zircaloy-4, K.-N. Choo, S.-I. Pyun and J.-K. Choi 149 (1987) 289
Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 149 (1987) 302

Constitution
Phase equilibria and crystal structures in the ternary systems: actinoid metal–transition metal–boron. I. Plutonium-borides with the $LuRuB_2$-type of structure, P. Rogl, P.E. Potter and H.R. Haines 149 (1987) 283

Creep and Relaxation
Creep and microstructural changes in dispersion hardened Ni–20% Cr–1% ThO_2 during proton irradiation, P. Jung and P.B. Chilson 149 (1987) 1

Crystallographic Properties
Phase equilibria and crystal structures in the ternary systems: actinoid metal–transition metal–boron. I. Plutonium-borides with the $LuRuB_2$-type of structure, P. Rogl, P.E. Potter and H.R. Haines 149 (1987) 283

Defects and Defect Structures
The collapse of defect cascades to dislocation loops, M.A. Kirk, I.M. Robertson, M.L. Jenkins, C.A. English, T.J. Black and J.S. Vetrano 149 (1987) 21
c-component dislocations in Zr–2.5 wt% Nb alloy, R.A. Holt, M. Griffiths and R.W. Gilbert 149 (1987) 51
Isochronal recovery and damage rate measurements in electron-irradiated dilute

NiGe, A. Bartels, F. Dworschak and M. Weigert 149 (1987) 160
Neutron irradiation damage in 64% cold-worked titanium, M. Griffiths, C.D. Cann and R.C. Styles 149 (1987) 200
Zones of radiation point defect instability near the [100] (010) edge dislocation in α-Fe, V.V. Kolomytkin 149 (1987) 321

Diffusion *(incl. Thermodiffusion)*
Étude de la diffusion chimique de l'oxygène dans $(U_{0,8}Pu_{0,2})O_{2-x}$ à 1400°C (Letter to the Editors), R. Ducroux, A.S. Bayoglu, M. Fromont and R. Lorenzelli 149 (1987) 101
Diffusion and trapping of ion-implanted helium in nickel, M.B. Lewis 149 (1987) 143
Hydrogen in 304 steel: diffusion, permeation and surface reaction, D.M. Grant, D.L. Cummings and D.A. Blackburn 149 (1987) 180
Tritium release from neutron-irradiated Li_2O: Diffusion in single crystal, T. Tanifuji, K. Noda, T. Takahashi and H. Watanabe 149 (1987) 227
Mass transport of cobalt and copper in Monel-400, A.R. Paul, M.C. Naik and K.S. Venkateswarlu 149 (1987) 277

Experimental Techniques
On the oxidation of zirconium by heat tinting, I.A. El-Shanshoury, A.V. Chirkin and A. El-Yazgi 149 (1987) 74

Fatigue and Fracture
Neutron irradiation effects on fatigue crack propagation in Alloy 718 at 650°C (Letter to the Editors), H.H. Smith and D.J. Michel 149 (1987) 109
Fatigue-crack propagation behavior of HT-9 steel, L.A. James 149 (1987) 138
Crack tip stress intensity factor changes arising from voids, gas filled bubbles and microcracks in irradiated materials, J. Weertman 149 (1987) 150
Mechanical and fracture toughness properties of an irradiated 20MnMoNi55 pressure vessel steel weld (Letter to the Editors), M.M. Ghoniem, D. Pachur and F.H. Hammad 149 (1987) 272

Fission Products
In-pile release behavior of metallic fission products in graphite materials of an HTGR fuel assembly, K. Hayashi, F. Kobayashi, K. Minato, K. Ikawa and K. Fukuda 149 (1987) 57
Fuel morphology effects on the chemical form of iodine release from severely damaged fuel, A.W. Cronenberg and D.J. Osetek 149 (1987) 252
Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 149 (1987) 302

Fuel Reprocessing
Characterisation of the activities associated with fast reactor cladding hulls, P. Biddle and J.H. Rees 149 (1987) 7

Fuels and Fuel Elements: Fast Reactors
Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 149 (1987) 302

Fuels and Fuel Elements: High-Temperature Reactors
In-pile release behavior of metallic fission products in graphite materials of an HTGR fuel assembly, K. Hayashi, F. Kobayashi, K. Minato, K. Ikawa and K. Fukuda 149 (1987) 57
Chemical vapor deposition of silicon carbide for coated fuel particles, K. Minato and K. Fukuda 149 (1987) 233

Fuel and Fuel Elements: Thermal Reactors
Survey of the power ramp performance testing of KWU's PWR UO_2 fuel, M. Gärtner and G. Fischer 149 (1987) 29
On the rate determining step in fission gas release from high burn-up water reactor fuel during power transients, C.T. Walker and M. Mogensen 149 (1987) 121
Fuel morphology effects on the chemical form of iodine release from severely damaged fuel, A.W. Cronenberg and D.J. Osetek 149 (1987) 252
A study on the mechanism of iodine-induced stress-corrosion cracking of Zircaloy-4, K.-N. Choo, S.-I. Pyun and J.-K. Choi 149 (1987) 289

Fusion Reactors: Blanket Materials *(incl. Lithium)*
Shrinkage and opacity of 100 kg/m^3 silica aerogel foam in liquid deuterium–tritium (Letter to the Editors), E.M. Fearon, P.R. Coronado, R.G. Garza, D.H. Darling and P.C. Souers 149 (1987) 105
Tritium release from neutron-irradiated Li_2O: Diffusion in single crystal, T. Tanifuji, K. Noda, T. Takahashi and H. Watanabe 149 (1987) 227
Activation product transport in FLiBe–vana-

dium alloy–HT9 system, A.C. Klein and D.-K. Sze 149 (1987) 261

Fusion Reactors: Impurity Transport in Plasma
Hydrocarbon formation due to hydrogen ion impact on amorphous hydrogenated carbon films (Letter to the Editors), J.W. Davis and A.A. Haasz 149 (1987) 349

Fusion Reactors: Surface Effects
Effects of irradiation on ferritic alloys and implications for fusion reactor applications, D.S. Gelles 149 (1987) 192
Observation of shape change in the Raman spectrum of graphite exposed to deuterium glow (Letter to the Editors), M. Kitajima, K. Aoki and M. Okada 149 (1987) 269
Hydrocarbon formation due to hydrogen ion impact on amorphous hydrogenated carbon films (Letter to the Editors), J.W. Davis and A.A. Haasz 149 (1987) 349

Fusion Reactors: Structural Materials
Diffusion and trapping of ion-implanted helium in nickel, M.B. Lewis 149 (1987) 143

Gases *(excl. Tritium)* in Metals, Alloys and Ceramics
Annealing behavior of krypton-implanted aluminum. I. Diffraction effects from krypton bubbles, I. Hashimoto, H. Yorikawa, H. Mitsuya, H. Yamaguchi, K. Takaishi, T. Kikuchi, K. Furuya, E. Yagi and M. Iwaki 149 (1987) 69
On the rate determining step in fission gas release from high burn-up water reactor fuel during power transients, C.T. Walker and M. Mogensen 149 (1987) 121
Diffusion and trapping of ion-implanted helium in nickel, M.B. Lewis 149 (1987) 143
Crack tip stress intensity factor changes arising from voids, gas filled bubbles and microcracks in irradiated materials, J. Weertman 149 (1987) 150
Fuel morphology effects on the chemical form of iodine release from severely damaged fuel, A.W. Cronenberg and D.J. Osetek 149 (1987) 252
Helium flux to grain boundaries during irradiation (Letter to the Editors), A.J.E. Foreman and B.N. Singh 149 (1987) 266
Observation of shape change in the Raman spectrum of graphite exposed to deuterium glow (Letter to the Editors), M. Kitajima, K. Aoki and M. Okada 149 (1987) 269
Growth of inert gas bubbles after implantation, N. Marochov, L.J. Perryman and P.J. Goodhew 149 (1987) 296

Glasses and Amorphous Materials
Air contamination by cesium in a canister containing nuclear waste glass (Letter to the Editors), H. Kamizono, S. Kikkawa, S. Tashiro, H. Nakamura and H. Kanazawa 149 (1987) 113

Grain Boundary
Helium flux to grain boundaries during irradiation (Letter to the Editors), A.J.E. Foreman and B.N. Singh 149 (1987) 266

Graphite and Carbon
In-pile release behavior of metallic fission products in graphite materials of an HTGR fuel assembly, K. Hayashi, F. Kobayashi, K. Minato, K. Ikawa and K. Fukuda 149 (1987) 57
Observation of shape change in the Raman spectrum of graphite exposed to deuterium glow (Letter to the Editors), M. Kitajima, K. Aoki and M. Okada 149 (1987) 269
Hydrocarbon formation due to hydrogen ion impact on amorphous hydrogenated carbon films (Letter to the Editors), J.W. Davis and A.A. Haasz 149 (1987) 349

Hydrogen and Hydrides
Hydrogen in 304 steel: diffusion, permeation and surface reaction, D.M. Grant, D.L. Cummings and D.A. Blackburn 149 (1987) 180
Critical helium fluence for hydrogen trapping in pre-damaged stainless steel, M. Ogawa, K. Saneyoshi, Y. Takagi, A. Shirota and Y. Suzawa 149 (1987) 247
Hydrocarbon formation due to hydrogen ion impact on amorphous hydrogenated carbon films (Letter to the Editors), J.W. Davis and A.A. Haasz 149 (1987) 349

Impurities
Impurity generation due to non-thermal electrons and its control by external bias, S. Takamura, A. Sato, Y. Shen and T. Okuda 149 (1987) 212

Irradiation Effects *(excl. Swelling and Voids)*
The collapse of defect cascades to dislocation loops, M.A. Kirk, I.M. Robertson, M.L. Jenkins, C.A. English, T.J. Black and J.S. Vetrano 149 (1987) 21
Neutron irradiation effects on fatigue crack propagation in Alloy 718 at 650°C (Letter to the Editors), H.H. Smith and D.J. Michel 149 (1987) 109
Isochronal recovery and damage rate measurements in electron-irradiated dilute NiGe, A. Bartels, F. Dworschak and M. Weigert 149 (1987) 160

Effects of irradiation on ferritic alloys and implications for fusion reactor applications, D.S. Gelles 149 (1987) 192
Neutron irradiation damage in 64% cold-worked titanium, M. Griffiths, C.D. Cann and R.C. Styles 149 (1987) 200
Impurity generation due to non-thermal electrons and its control by external bias, S. Takamura, A. Sato, Y. Shen and T. Okuda 149 (1987) 212
Critical helium fluence for hydrogen trapping in pre-damaged stainless steel, M. Ogawa, K. Saneyoshi, Y. Takagi, A. Shirota and Y. Suzawa 149 (1987) 247
Helium flux to grain boundaries during irradiation (Letter to the Editors), A.J.E. Foreman and B.N. Singh 149 (1987) 266
Growth of inert gas bubbles after implantation, N. Marochov, L.J. Perryman and P.J. Goodhew 149 (1987) 296
Effect of nickel content of 9Cr–1MoVNb and 12Cr–1MoVW steels on the aging and irradiation response of impact properties, W.R. Corwin, J.M. Vitek and R.L. Klueh 149 (1987) 312
Zones of radiation point defect instability near the [100] (010) edge dislocation in α-Fe, V.V. Kolomytkin 149 (1987) 321
Effect of helium on the deformation mode for Ti–7.5Al alloy, Y. Higashiguchi, Y. Suzuki, E. Yagi, M. Narui and H. Kayano 149 (1987) 328
Recovery behavior in neutron irradiated β-SiC, T. Suzuki, T. Maruyama, T. Iseki, T. Mori and M. Ito 149 (1987) 334

Kinetics
On the oxidation of zirconium by heat tinting, I.A. El-Shanshoury, A.V. Chirkin and A. El-Yazgi 149 (1987) 74

Liquid Metals
Activation product transport in FLiBe–vanadium alloy–HT9 system, A.C. Klein and D.-K. Sze 149 (1987) 261

Mechanical Properties
Determination of dynamic Young's modulus, shear modulus, and Poisson's ratio as a function of temperature for depleted uranium–0.75 wt% titanium using the piezoelectric ultrasonic composite oscillator technique, K.H. Keene, J.T. Hartman, Jr., A. Wolfenden and G.M. Ludtka 149 (1987) 218
Mechanical and fracture toughness properties of an irradiated 20MnMoNi55 pressure vessel steel weld (Letter to the Editors), M.M. Ghoniem, D. Pachur and F.H. Hammad 149 (1987) 272
A study on the mechanism of iodine-induced stress-corrosion cracking of Zircaloy-4, K.-N. Choo, S.-I. Pyun and J.-K. Choi 149 (1987) 289
Effect of nickel content of 9Cr–1MoVNb and 12Cr–1MoVW steels on the aging and irradiation response of impact properties, W.R. Corwin, J.M. Vitek and R.L. Klueh 149 (1987) 312

Microstructure *(incl. Textures)*
Creep and microstructural changes in dispersion hardened Ni–20% Cr–1% ThO_2 during proton irradiation, P. Jung and P.B. Chilson 149 (1987) 1
Fatigue-crack propagation behavior of HT-9 steel, L.A. James 149 (1987) 138

Monitoring Methods
Acoustic emission from low temperature phase transformations in plutonium, C.R. Heiple and S.H. Carpenter 149 (1987) 168

Phase Transformations
Acoustic emission from low temperature phase transformations in plutonium, C.R. Heiple and S.H. Carpenter 149 (1987) 168

Physical Properties
The dielectric constant of UO_2 below the Néel point, N. Hampton, G.A. Saunders, J.H. Harding and A.M. Stoneham 149 (1987) 18
Isochronal recovery and damage rate measurements in electron-irradiated dilute NiGe, A. Bartels, F. Dworschak and M. Weigert 149 (1987) 160

Plutonium, Plutonium Alloys and Compounds
Étude de la diffusion chimique de l'oxygène dans $(U_{0,8}Pu_{0,2})O_{2-x}$ à 1400°C (Letter to the Editors), R. Ducroux, A.S. Bayoglu, M. Fromont and R. Lorenzelli 149 (1987) 101
Acoustic emission from low temperature phase transformations in plutonium, C.R. Heiple and S.H. Carpenter 149 (1987) 168
Phase equilibria and crystal structures in the ternary systems: actinoid metal–transition metal–boron. I. Plutonium-borides with the $LuRuB_2$-type of structure, P. Rogl, P.E. Potter and H.R. Haines 149 (1987) 283

Pore Behaviour
Annealing behavior of krypton-implanted aluminum. I. Diffraction effects from krypton bubbles, I. Hashimoto, H. Yorikawa, H. Mitsuya, H. Yamaguchi, K. Takaishi, T. Kikuchi, K. Furuya, E. Yagi and M. Iwaki 149 (1987) 69

On the rate determining step in fission gas release from high burn-up water reactor fuel during power transients, C.T. Walker and M. Mogensen 149 (1987) 121

Powder Processes and Products
Production of uranium metal using a thermal plasma (Letter to the Editors), R.C. Burk 149 (1987) 103

Refractory Metals and Alloys *(excl. Zr)*
Diffusion and trapping of ion-implanted helium in nickel, M.B. Lewis 149 (1987) 143
Neutron irradiation damage in 64% cold-worked titanium, M. Griffiths, C.D. Cann and R.C. Styles 149 (1987) 200

Safety – Nuclear Reactors
Fuel morphology effects on the chemical form of iodine release from severely damaged fuel, A.W. Cronenberg and D.J. Osetek 149 (1987) 252

Sodium
Compatibility of high-purity Fe–(5 to 15)Cr–1Mo ferritic steels in a sodium environment, T. Suzuki and I. Mutoh 149 (1987) 41

Steels
Characterisation of the activities associated with fast reactor cladding hulls, P. Biddle and J.H. Rees 149 (1987) 7
Compatibility of high-purity Fe–(5 to 15)Cr–1Mo ferritic steels in a sodium environment, T. Suzuki and I. Mutoh 149 (1987) 41
Fatigue-crack propagation behavior of HT-9 steel, L.A. James 149 (1987) 138
Hydrogen in 304 steel: diffusion, permeation and surface reaction, D.M. Grant, D.L. Cummings and D.A. Blackburn 149 (1987) 180
Effects of irradiation on ferritic alloys and implications for fusion reactor applications, D.S. Gelles 149 (1987) 192
Critical helium fluence for hydrogen trapping in pre-damaged stainless steel, M. Ogawa, K. Saneyoshi, Y. Takagi, A. Shirota and Y. Suzawa 149 (1987) 247
Mechanical and fracture toughness properties of an irradiated 20MnMoNi55 pressure vessel steel weld (Letter to the Editors), M.M. Ghoniem, D. Pachur and F.H. Hammad 149 (1987) 272
Effect of nickel content of 9Cr–1MoVNb and 12Cr–1MoVW steels on the aging and irradiation response of impact properties, W.R. Corwin, J.M. Vitek and R.L. Klueh 149 (1987) 312

Structural Materials
Creep and microstructural changes in dispersion hardened Ni–20% Cr–1% ThO_2 during proton irradiation, P. Jung and P.B. Chilson 149 (1987) 1
Effect of helium on the deformation mode for Ti–7.5Al alloy, Y. Higashiguchi, Y. Suzuki, E. Yagi, M. Narui and H. Kayano 149 (1987) 328

Thermodynamic Properties
Thermodynamic study of UO_{2+x} by solid state emf technique, A. Nakamura and T. Fujino 149 (1987) 80
Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 149 (1987) 302
Heat capacity measurement of $U_{1-y}Gd_yO_2$ ($0.00 \leqslant y \leqslant 0.142$) from 310 to 1500 K, H. Inaba, K. Naito and M. Oguma 149 (1987) 341

Thermophysical Properties
Vaporisation thermodynamics of the nickel-rich phases in the Ni–Te binary system – A high temperature mass spectrometric study, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 149 (1987) 302

Tritium
Shrinkage and opacity of 100 kg/m^3 silica aerogel foam in liquid deuterium–tritium (Letter to the Editors), E.M. Fearon, P.R. Coronado, R.G. Garza, D.H. Darling and P.C. Souers 149 (1987) 105
Tritium release from neutron-irradiated Li_2O: Diffusion in single crystal, T. Tanifuji, K. Noda, T. Takahashi and H. Watanabe 149 (1987) 227

Uranium and Uranium Alloys
Production of uranium metal using a thermal plasma (Letter to the Editors), R.C. Burk 149 (1987) 103
Determination of dynamic Young's modulus, shear modulus, and Poisson's ratio as a function of temperature for depleted uranium–0.75 wt% titanium using the piezoelectric ultrasonic composite oscillator technique, K.H. Keene, J.T. Hartman, Jr., A. Wolfenden and G.M. Ludtka 149 (1987) 218

Uranium Ceramics
The dielectric constant of UO_2 below the Néel point, N. Hampton, G.A. Saunders, J.H. Harding and A.M. Stoneham 149 (1987) 18
Survey of the power ramp performance testing of KWU's PWR UO_2 fuel, M. Gärtner and G. Fischer 149 (1987) 29

Thermodynamic study of UO_{2+x} by solid state emf technique, A. Nakamura and T. Fujino 149 (1987) 80

Étude de la diffusion chimique de l'oxygène dans $(U_{0,8}Pu_{0,2})O_{2-x}$ à 1400°C (Letter to the Editors), R. Ducroux, A.S. Bayoglu, M. Fromont and R. Lorenzelli 149 (1987) 101

On the rate determining step in fission gas release from high burn-up water reactor fuel during power transients, C.T. Walker and M. Mogensen 149 (1987) 121

Heat capacity measurement of $U_{1-y}Gd_yO_2$ ($0.00 \leqslant y \leqslant 0.142$) from 310 to 1500 K, H. Inaba, K. Naito and M. Oguma 149 (1987) 341

Void Formation

Crack tip stress intensity factor changes arising from voids, gas filled bubbles and microcracks in irradiated materials, J. Weertman 149 (1987) 150

Wastes *(Radioactive)*

Air contamination by cesium in a canister containing nuclear waste glass (Letter to the Editors), H. Kamizono, S. Kikkawa, S. Tashiro, H. Nakamura and H. Kanazawa 149 (1987) 113

Preselection of Ni–Cr(–Mo) alloys as potential canister materials for vitrified high active nuclear waste by electrochemical testing, H. Bort, I. Wolf and S. Leistikow 149 (1987) 132

Zirconium, Zirconium Alloys and Compounds

c-component dislocations in Zr–2.5 wt% Nb alloy, R.A. Holt, M. Griffiths and R.W. Gilbert 149 (1987) 51

On the oxidation of zirconium by heat tinting, I.A. El-Shanshoury, A.V. Chirkin and A. El-Yazgi 149 (1987) 74

A study on the mechanism of iodine-induced stress-corrosion cracking of Zircaloy-4, K.-N. Choo, S.-I. Pyun and J.-K. Choi 149 (1987) 289